

ABSTRACT

A spin filter apparatus for cleaning an influent stream is provided and includes a housing having at least one inlet port for receiving the influent stream, at least one waste port for discharging waste and at least one output port for discharging a processed clean effluent stream. The apparatus also includes a discharge conduit coupled to the at least one outlet port for discharging the processed clean effluent stream; and a spin filter assembly disposed within the housing and including a filter screen set formed of at least two screen filters that are rotatable about the discharge conduit and freely movable in a vertical direction along the discharge conduit. The screen set is coupled to a magnetic shaft that permits the screen set to be a free floating structure that is movable in the vertical direction due to a magnetic field generated between the magnetic shaft and a first magnetic element disposed in the housing that permits the screen set to be controllably and selectively moved in the vertical direction as the screen set rotates, thereby providing two independent cleaning actions.